

## **REMARKS**

The Specification has been amended. Claims 1413, 1439-1442, 1445, 1478, 1500, 1583, 1688, 1709, and 1751 have been amended. Claim 1446 has been canceled. Therefore, claims 1413-1445, 1447-1500, 1583, 1688, 1709, and 1751 are pending in the case. Further examination and reconsideration of pending claims 1413-1445, 1447-1500, 1583, 1688, 1709, and 1751 are hereby respectfully requested.

### **Double Patenting Rejections:**

Claims 1413-1500, 1583, 1688, 1709, and 1751 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2132-2215, 2296, 2397, 2416, and 2454 of copending Application No. 09/956,837, claims 1083-1160, 1234, 1339, and 1375 of copending Application No. 09/956,852, claims 742-820, 896, 989, 1005, and 1044 of copending Application No. 09/956,848, and claims 5419-5475, 5533, 5648, 5706, and 5758 of copending Application No. 09/956,839. Applicants respectfully traverse these rejections. However, to expedite prosecution, a Terminal Disclaimer is submitted in separate paper to obviate the double patenting rejections in accordance with 37 C.F.R. § 1.321(c). The Terminal Disclaimer is believed sufficient to overcome any assertion of judicially created obviousness-type double patenting between the present claims and claims of copending Application Nos. 09/956,837, 09/956,852, 09/956,848, and 09/956,839.

### **Section 102 Rejections:**

Claims 1413-1420, 1424, 1433, 1436-1438, 1443, 1450-1451, 1478-1482, 1487-1488, 1500, 1583, and 1688 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,748,318 to Maris et al. (hereinafter "Maris"). As will be set forth in more detail below, the § 102 rejections of claims 1413-1420, 1424, 1433, 1436-1438, 1443, 1450-1451, 1478-1482, 1487-1488, 1500, 1583, and 1688 are respectfully traversed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), MPEP § 2131. The cited art does not disclose all limitations of the currently pending claims, some distinctive limitations of which are set forth in more detail below.

**The cited art does not teach a processor coupled to a measurement device and configured to determine a presence of macro defects on a back side of a specimen from one or more output signals generated by the measurement device.** Amended independent claim 1413 recites in part: “a processor coupled to the measurement device and configured to determine a first property, a second property, and a third property of the specimen from the one or more output signals during use,...wherein the second property comprises a presence of defects on the specimen, wherein the defects comprise macro defects on a back side of the specimen.” Support for the amendments to claim 1413 can be found in claim 1442, for example, as originally filed. Amended independent claims 1500, 1583, and 1688 recite similar limitations.

Maris discloses an optical stress generator and detector. Maris, however, does not disclose a processor coupled to a measurement device and configured to determine a presence of macro defects on a back side of a specimen from one or more output signals generated by the measurement device. For example, Maris states that “the physical properties of the sample 51 which may be determined in this way include...interfacial contaminants.” (Maris -- col. 9, line 66 - col. 10, line 6.) Therefore, Maris discloses detecting defects at an interface between two layers or between a layer and a substrate. However, Maris does not disclose detecting defects on a back side of a specimen (i.e., a surface of a specimen on which semiconductor devices will not be or are not formed). As such, Maris does not teach a processor coupled to a measurement device and configured to determine a presence of macro defects on a back side of a specimen from one or more output signals generated by the measurement device, as recited in claims 1413, 1500, 1583, and 1688. Therefore, Maris does not teach all limitations of claims 1413, 1500, 1583, and 1688.

For at least the aforementioned reasons, claims 1413, 1500, 1583, and 1688 are not anticipated by the cited art. Therefore, claims 1414-1420, 1424, 1433, 1436-1438, 1443, 1450-1451, 1478-1482, and 1487-1488, which depend from claim 1413, are also not anticipated by the cited art for at least the same reasons. Accordingly, removal of the § 102 rejection of claims 1413-1420, 1424, 1433, 1436-1438, 1443, 1450-1451, 1478-1482, 1487-1488, 1500, 1583, and 1688 is respectfully requested.

#### **Section 103(a) Rejections:**

Claims 1421-1423, 1425-1432, 1434-1435, 1439-1442, 1444-1449, 1452-1477, 1483-1486, 1489-1499, 1709, and 1751 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Maris in view of U.S. Patent No. 5,872,632 to Moore (hereinafter “Moore”) and U.S. Patent No. 4,865,445 to Kuriyama et

al. (hereinafter “Kuriyama”). As will be set forth in more detail below, the §103(a) rejections of claims 1421-1423, 1425-1432, 1434-1435, 1439-1442, 1444-1449, 1452-1477, 1483-1486, 1489-1499, 1709, and 1751 are respectfully traversed.

**The cited art does not teach or suggest a processor coupled to a measurement device and configured to determine a presence of macro defects on a back side of a specimen from one or more output signals generated by the measurement device, as recited in claim 1413.** As set forth in more detail above, Maris does not teach all limitations of claim 1413. Amended independent claims 1709 and 1751 recite similar limitations. Therefore, Maris does not teach all limitations of claims 1413, 1709, and 1751.

In addition, Maris does not suggest or provide motivation for all limitations of claims 1413, 1709, and 1751. For example, Maris does not suggest the desirability of determining a presence of macro defects on a back side of a specimen. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). MPEP 2143.01. Therefore, even if Maris could be combined or modified to teach the limitations of the present claims, the resultant combinations or modifications are not obvious since the prior art does not suggest the desirability of such combinations or modifications.

In addition, Maris cannot be combined with Moore and/or Kuriyama to overcome the deficiencies therein. For example, Moore discloses a cluster tool layer thickness measurement apparatus. Moore states that “This invention related generally to determining the quality of layers deposited on a substrate and in particular to measuring the thickness of a layer deposited on a substrate.” (Moore -- col. 1, lines 7-9.) Therefore, Moore teaches measuring a thickness of a layer on a substrate. However, Moore does not teach a processor coupled to a measurement device and configured to determine a presence of macro defects on a back side of a specimen from one or more output signals generated by the measurement device, as recited in claims 1413, 1709, and 1751. Consequently, Moore does not teach all limitations of claims 1413, 1709, 1751 and cannot be combined with Maris and/or Kuriyama to overcome deficiencies therein.

Kuriyama discloses an apparatus for detecting faults on the surface of a resist master disc and measuring the thickness of the resist coating layer. For example, Kuriyama states that “it is necessary, in the process of producing the master disc, to detect the presence of faults such as dust, defects, or flaws on

Kuriyama discloses detecting defects on a front side of a master disc. However, Kuriyama does not teach a processor coupled to a measurement device and configured to determine a presence of macro defects on a back side of a specimen from one or more output signals generated by the measurement device, as recited in claims 1413, 1709, and 1751. Consequently, Kuriyama does not teach all limitations of claims 1413, 1709, 1751 and cannot be combined with Maris and/or Moore to overcome deficiencies therein.

Therefore, none of the cited art, either individually or in any combination thereof, teaches, suggests, or provides motivation for a processor coupled to a measurement device and configured to determine a presence of macro defects on a back side of a specimen from one or more output signals generated by the measurement device, as recited in claims 1413, 1709, 1751. Consequently, the cited art does not teach, suggest, or provide motivation for all limitations of claims 1413, 1709, 1751.

For at least the reasons stated above, claims 1413, 1709, 1751 are patentably distinct over the cited art. Therefore, claims 1421-1423, 1425-1432, 1434-1435, 1439-1442, 1444-1449, 1452-1477, 1483-1486, and 1489-1499, which depend from claim 1413, are also patentably distinct over the cited art for at least the same reasons. Accordingly, removal of the § 103(a) rejections of claims 1421-1423, 1425-1432, 1434-1435, 1439-1442, 1444-1449, 1452-1477, 1483-1486, 1489-1499, 1709, and 1751 is respectfully requested.

#### **Information Disclosure Statements:**

Applicants note that the Information Disclosure Statements filed on March 28, 2003 and June 20, 2003, and the references cited therein, have not been considered by the Examiner. Careful consideration of the references listed on the Forms PTO 1449 of these Information Disclosure Statements and return of the signed pages are respectfully requested.

#### **CONCLUSION**

This response constitutes a complete response to all issues raised in the Office Action mailed July 31, 2003. In addition, the art cited but not relied upon is not believed to be pertinent to the patentability of the present claims. In view of the remarks traversing rejections presented therein, Applicants assert that pending claims 1413-1445, 1447-1500, 1583, 1688, 1709, and 1751 are in condition for allowance. If the

Examiner has any questions, comments, or suggestions, the undersigned earnestly requests a telephone conference.

The Commissioner is authorized to charge any required fees or credit any overpayment to Conley Rose, P.C. Deposit Account No. 03-2769/5589-02305.

Respectfully submitted,



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